UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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BRINKS HOFER GILSON & LIONE
SUITE 3600
455 N. CITYFRONT PLAZA DR.
CHICAGO, IL 60611

EXAMINER
LEUNG, CHRISTINA Y

ART UNIT	PAPER NUMBER
2633	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/038,502	COSTA, PIERRE
	Examiner	Art Unit	
	Christina Y. Leung	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>21 December 2005</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,3-11 and 13-20</u> is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1,3-11 and 13-20</u> is/are rejected.
7)☒ Claim(s) <u>1,3-11 and 13-20</u> is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
     1.☐ Certified copies of the priority documents have been received.
     2.☐ Certified copies of the priority documents have been received in Application No. _____.
     3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible

for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been

timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR

1.114. Applicant's submission filed on 21 December 2005 has been entered.

Claim Objections

2.   Claims 1, 3-10, 11, and 13-20 are objected to because of the following informalities:

        Claim 1 recites "the optical signal" and "the delayed optical signal" in lines 8 and 11

respectively of the claim. Examiner respectfully notes that Applicant should change these

phrases to "the optical stream" and "the delayed optical stream" so that the terminology is

consistent throughout the claim.

        Likewise, claim 11 recites "the delayed optical signal" in the last line of the claim.

Examiner respectfully notes that Applicant should change this phrase to "the delayed optical

stream" so that the terminology is consistent throughout the claim.

        Claims 3-10 and 13-2 depend on claims 1 and 11 respectively and are also objected to for

the same reason. Also, claims 9 and 19 in particular each recite "the delayed optical signal" in

line 2 of each claim. Examiner respectfully notes that Applicant should change this phrase to

"the delayed optical stream" in both claims so that the terminology is consistent throughout the

claims.

        Appropriate correction is required.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 1, 3-6, 11, and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Hoard et al. (US 6,631,481 B1) in view of Warbrick et al. (US 6,694,098 B1).

Regarding claim 11, Hoard et al. discloses an apparatus (Figure 6) comprising:

an optical splitter 30 to split an optical stream (from input 14) into a primary optical

stream and a secondary optical stream (column 6, lines 6-7. Hoard et al. also discloses that the

stream may be optical, and that an optical splitter may be used accordingly; column 5, lines 10-

14) ;

an optoelectronic converter (in waveform analyzer 34) to convert the secondary optical

stream to an electrical signal;

a processor (including waveform analyzer 34; column 6, lines 9-15) operative to

identify a data signal from the electrical signal,

receive a selection from a user indicating at least the particular portion of the

optical stream to be modified (waveform analyzer 34 responds to a "selectable control

event" as disclosed in column 5, lines 18-21 and may include a variable delay that is

adjusted to select the particular portion of the stream relative to when a control event

detected in the data itself; see also column 2, lines 27-31 and column 5, lines 61-67), and

identify the particular portion of the optical stream based on at least the data

signal and the received selection from the user and ;

an optical delay 42 to delay the primary optical stream to provide a delayed optical

stream; and

an optical switch (either frequency domain transient filter 26, which is triggered to distort

the frequency of the signal, or distortion injector 38 and combiner 46, which work together to

trigger amplitude changes in the signal; column 5, lines 42-67; column 6, lines 11-20) responsive

to the processor to modify the particular portion of the delayed optical signal based on the

received selection from the user.

Similarly, regarding claim 1, Hoard et al. disclose a method (Figure 6) comprising:

splitting an optical stream (from input 14) into a primary optical stream and a secondary

optical stream (using splitter 30);

converting the secondary optical stream to an electrical signal (in waveform analyzer 34);

identifying a data signal from the electrical signal;

receiving a selection from a user indicating at least a particular portion of the optical

stream to be modified (waveform analyzer 34 responds to a "selectable control event" as

disclosed in column 5, lines 18-21 and may include a variable delay that is adjusted to select the

particular portion of the stream relative to when a control event detected in the data itself; see

also column 2, lines 27-31 and column 5, lines 61-67);

identifying a particular portion of the optical stream based on at least the data signal and

the received selection from the user (using waveform analyzer 34);

delaying the primary optical stream to provide a delayed optical stream (using delay line

42); and

modifying the particular portion of the delayed optical signal based on the received

selection from the user (using filter 26 and/or distortion injector 38; column 5, lines 42-67;

column 6, lines 11-20).

Further regarding claims 1 and 11, Hoard et al. disclose recovering a data signal and

identifying the particular portion based on the data signal and user selection, and further disclose

that the processing includes coordinating the timing between the two signals in the two paths

(i.e., the signal being analyzed by the waveform analyzer and the signal being delayed by the

delay line; column 6, lines 54-60), but they do not specifically disclose recovering a clock signal

or using a clock signal as part of the identifying the particular portion.

However, Warbrick et al. teach a system (Figure 3) related to the one disclosed by Hoard

et al. including splitting an optical signal 40 into a primary stream and a secondary stream,

delaying the primary stream (using delay 62), and converting the secondary stream into an

electrical signal and processing it to identify a portion of the optical stream (column 4, lines 53-

67; column 5, lines 1-19). Warbrick et al. further teach that controlling the timing of the signals

may include recovering a clock signal (column 6, lines 55-61). Regarding claims 1 and 11, it

would have been obvious to a person of ordinary skill in the art to specifically include a clock

recovery circuit as taught by Warbrick et al. in the system and method disclosed by Hoard et al.

in order to ensure that the timing of the two signals in the two paths is precisely controlled and

that the correct particular portion of the primary signal is properly identified/modified.

Regarding claims 3 and 13, Hoard et al. disclose that the processor (waveform analyzer 34 and waveform generator 36) generates a gating signal at the particular position based on the processing (column 5, lines 21-25 and lines 39-45; column 6, lines 9-20), and that the optical switch modifies the particular portion based on the gating signal (column 5, lines 39-45; column 6, lines 9-20).

Regarding claims 4 and 14, Hoard et al. do not specifically disclose inverting at least one bit in the stream, but they do disclose altering the amplitude of a portion of the stream. It would be well understood in the art that providing the amplitude distortion disclosed by Hoard et al. would inherently invert bits in a portion of an amplitude modulated stream (by changing 0s in the stream to 1s, etc.). Hoard et al. do not specifically disclose amplitude modulated signals, but amplitude modulation communications systems are commonly known, and therefore, it would have been obvious to a person of ordinary skill in the art to use such signals in the communication system disclosed by Hoard et al. as an engineering design choice of a known way to provide the data signal using known communications devices.

Regarding claims 5 and 15, Hoard et al. disclose that the optical switch modifies the particular portion by suppressing at least one bit in the particular portion of the delayed optical stream (Hoard et al. in particular disclose that the portion of the stream may be attenuated; column 5, lines 48-49).

Regarding claims 6 and 16, Hoard et al. disclose that the particular portion comprises a particular bit position in the optical stream (column 2, lines 21-31).

5.   Claims 7-10 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Hoard et al. in view of Warbrick et al. as applied to claims 1 and 11 above, and further in view of

Barton (US 5,646,997 A).

Regarding claims 7-10 and 17-20, Hoard et al. do not specifically disclose that the optical

stream comprises a SMPTE-standard video stream. However, SMPTE-standard video steams,

and SMPTE259M video streams in particular, are known standard formats for video data, as

Barton particularly teaches (column 5, lines 14-17).

Regarding claims 9, 10, 19, and 20 in particular, Hoard et al. already disclose that the

modifying the particular portion of the signal introduces at least one bit error in the stream

(column 4, lines 13-15). Barton et al. further teach introducing errors in SMPTE259M streams in

order to embed additional information into the stream such as for authentication purposes,

wherein a particular portion to be modified may be part of an active video portion (column 4,

lines 43-45; column 5, lines 10-24; column 7, lines 38-45).

Regarding claims 7-10 and 17-20, it would have been obvious to a person of ordinary

skill in the art to use SMPTE259M video streams as taught by Barton in the system and method

for modifying a stream disclosed by Hoard et al. in order to test the transmission of such

commonly known SMPTE259M video streams and improve the communication of video data in

a network.

Response to Arguments

6.   Applicant's arguments filed 21 December 2005 have been fully considered but they are

not persuasive.

7.   Examiner respectfully disagrees with Applicant's assertion on pages 6-7 of the response

that Hoard et al. do not disclose or suggest receiving a selection from a user indicating at least a

particular portion of the optical stream to be modified. On the contrary, Hoard et al. disclose that

the processor (waveform analyzer 34) responds to a "selectable control event" (column 5, lines

18-21; see also column 2, lines 27-31). Hoard et al. further discloses that waveform analyzer 34

may include a variable delay to select a particular time after the control event to modify the

signal (column 5, lines 61-67); this timing adjustment by the user also inherently affects which

particular portion of the optical stream is eventually modified.

Therefore, Hoard et al. disclose receiving a selection from a user indicating at least a

particular portion of the optical stream to be modified, since they disclose selecting which

particular control events to look for in the data of the optical stream as well as selecting a time

after detecting the control event for modifying the stream. Examiner notes that Hoard et al.

disclose identifying the particular portion of the optical stream based on both the data signal and

the received selection from the user, since the "selection" is the user's *choice* of control event

and timing, and the data itself is read to actually detect the control event itself.

8.   Also, Examiner respectfully notes that the objection to claim 1 made in the previous

Office Action regarding terminology in the claim is made again in this Office Action, since claim

1 as currently amended still includes inconsistency in terminology as noted above.

Conclusion

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Christina Y. Leung whose telephone number is 571-272-3023.

The examiner can normally be reached on Monday to Friday, 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CHRISTINA LEUNG
PRIMARY EXAMINER